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(US). **BANCROFT, Randy** [US/US]; 2837 Perry Street, Denver, CO 80212 (US).

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(74) **Agent: KINNEAR, Brian, P.**; 555 17th Street, Suite 3200, Denver, CO 80201 (US).

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(71) **Applicant** (*for all designated States except US*): **CENTURION WIRELESS TECHNOLOGIES, INC.** [US/US]; 3300 Folkways Blvd, Lincoln, NE 68504 (US).

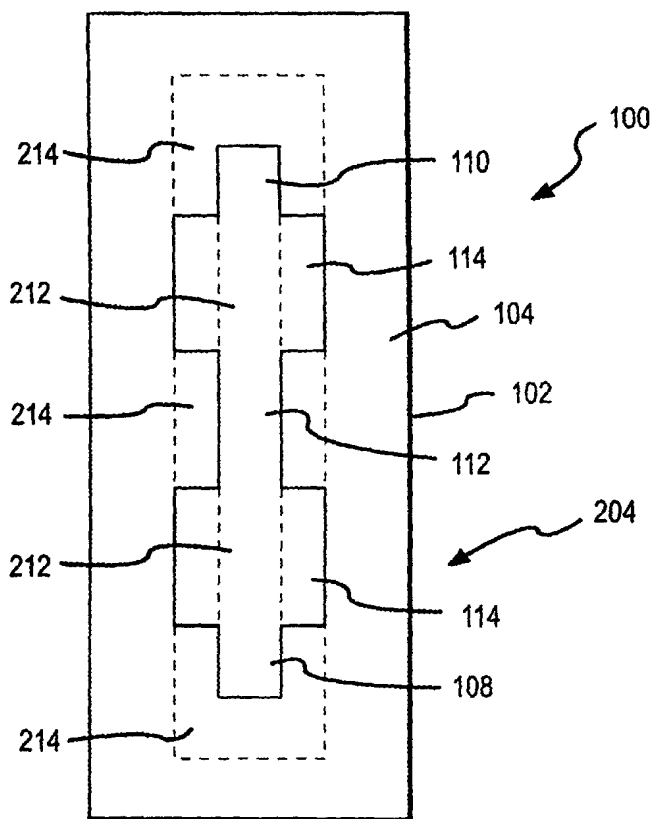
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(72) **Inventors; and**

(75) **Inventors/Applicants** (*for US only*): **BATEMAN, Blaine, R.** [US/US]; 593 Juniper Court, Louisville, CO 80027

[Continued on next page]

(54) **Title:** ANTENNA ARRAYS AND METHODS OF MAKING THE SAME



(57) **Abstract:** The present invention provides an antenna array. The antenna array comprises a substrate (102) having a first side and a second side opposite the first side. The first side has a first conductor (106) comprising narrow elements (112) and wide elements (114). The second side has a second conductor (206) comprising narrow elements (212) and wide elements (214) such that the first conductor narrow elements are above the second conductor wide elements and the first conductor wide elements are above the second conductor narrow elements. The first conductor further has a feed element (108) and a terminating element (110).

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/10693

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01Q 1/38  
US CL : 343/700ms

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 343/ 700ms, 872, 789, 731

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST, WEST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,339,089 A (Dienes) 16 August 1994 (16.8.1994), fig. 3a	1-13, 17-24, 26-28, 30-41 and 47-53
Y		14-16, 25, 29 and 42-14-16, 25 and 29
Y	US 4,475,107 A (Makimoto et al.) 2 October 1984 (2.10.1984), col. 1	
Y	US 5,075,820 A (Juskey et al.) 24 December 1991 (24.12.1991), col. 2	42-46

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"P" document published prior to the international filing date but later than the priority date claimed	

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

James Vannucci

Telephone No. 571-272-1820